
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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CHROMIUM IN SEPTEMBER 1997

Chromite consumption decreased 7% in September 1997 compared with that of the previous month, according to the U.S. Geological Survey. Net production of chromium ferroalloys and metal in September 1997 increased slightly compared with revised production data for August 1997, and consumption of chromium ferroalloys and metal in September 1997 decreased 12% compared with consumption in August 1997. Chromite stocks increased 5% over the same period. At the September rate of consumption, chromium stocks represented 6 months of domestic supply. Chromium ferroalloys and metal stocks decreased slightly compared with those of August 1997. At the September rate of consumption, chromium ferroalloys and metal stocks represent 0.8 months of domestic supply.

Included in this Mineral Industry Surveys are U.S. consumption and stocks of chromite; U.S. net production, net shipments, and stocks of chromium materials; U.S. Government inventory for September 1997; U.S. consumption by end use and consumer stocks for chromium ferroalloys and metal for August and September 1997; and foreign trade for August 1997.

Update:

The 1996 Chromium Mineral Industry Surveys Annual Review is now available from the USGS Minerals Information web site (see Internet address below letterhead above) or from the USGS MINES FaxBack service (see phone number below letterhead above).

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS 1/

(Metric tons, gross weight unless otherwise noted)

	1996	1997				
	Jan.-Dec.	2nd quarter	July	Aug.	Sept.	Jan. - Sept.
Production:						
Chromium ferroalloys and metal: 2/						
Net production:						
Gross weight	36,800	16,600 r/	5,760 r/	5,220 r/	5,380	46,500
Chromium content	26,400	11,000 r/	3,790 r/	3,390 r/	3,630	31,400
Net shipments	38,800	17,600 r/	5,960 r/	6,570 r/	2,320	47,500
Stainless steel production 3/	1,920,000	510,000	NA	NA	NA	996,000 4/
Components of U.S. supply:						
Stainless steel scrap receipts	579,000	191,000	61,000	56,900	46,500	532,000
Imports for consumption						
Chromite ore	250,000	35,300	3,960	74,100	NA	241,000 5/
Chromium ferroalloys 6/	420,000	126,000	37,600	33,600	NA	269,000 5/
Chromium metal 7/	8,730	2,890	824	902	NA	6,920 5/
Stainless steel	781,000	510,000	NA	NA	NA	510,000 4/
Stainless steel scrap	50	NA	NA	NA	NA	NA
Distribution of U.S. supply:						
Consumption:						
Chromite ore	282,000	93,700 r/	30,700 r/	30,700	28,500	260,000
Chromium ferroalloys & metal	333,000	91,800	30,700	31,300	27,700	272,000 5/
Exports:						
Chromite ore	69,400	3,700	759	1,070	NA	14,500 5/
Chromium ferroalloys	15,800	3,080	358	633	NA	6,520 5/
Chromium metal	1,330	1,020	274	317	NA	1,990 5/
Stainless steel	NA	NA	NA	NA	NA	NA
Stainless steel scrap	303	105	40	43	NA	250 5/
Stocks at end of period:						
Industry:						
Chromite ore:						
Chemical and metallurgical	165,000	159,000 r/	144,000 r/	163,000 r/	171,000	XX
Refractory	7,890	8,640	8,400 r/	8,550 r/	8,770	XX
Total	173,000	168,000 r/	152,000 r/	172,000 r/	180,000	XX
Chromium ferroalloys and metal:						
Producer	6,450	3,970 r/	3,770 r/	2,420 r/	5,480	XX
Consumer	27,600	20,700	20,800	19,300	16,100	XX
Government stockpile:						
Chromite ore	1,190,000	1,140,000	1,140,000	1,220,000	1,120,000	XX
Chromium ferroalloys	1,050,000	1,020,000	1,020,000	1,020,000	1,020,000	XX
Chromium metal	7,720	7,720	7,720	7,720	7,720	XX

r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes low- and high-carbon ferrochromium, chromium concentrates, ferrochromium, chromium metal, and other miscellaneous alloys.

3/ Data on stainless steel production from American Iron and Steel Institute, quarterly production of stainless and heat resisting raw steel.

4/ Includes data for January through June; July, August and September data not available at time of publication.

5/ Includes data for January through August; September data not available at time of publication.

6/ Includes high-, medium-, and low- ferrochromium and ferrochromium silicon.

7/ Includes waste and scrap and other.

TABLE 2
U.S. CONSUMPTION, BY END USE, AND CONSUMER STOCKS OF
CHROMIUM FERROALLOYS AND METAL IN AUGUST 1997 1/

(Metric tons, gross weight unless otherwise noted)

End use	Ferrochromium		Ferro- chromium silicon	Other	Total	Jan. through Aug. total 2/
	Low- carbon	Medium- and high- carbon				
Steel:						
Carbon	281	356	9	3	649	5,370
Stainless and heat resisting	543	20,900	W	W	21,500	165,000
Full alloy	283	1,720	127	3	2,130	19,400
High-strength low-alloy and electric	202	W	612	W	814	6,850
Tool	W	351	W	--	351	2,880
Cast irons	W	54	--	W	54	766
Superalloys	190	474	--	322	986	6,850
Alloys:						
Welding materials 3/	--	10	--	7	17	95
Other alloys 4/	17	W	--	47	64	696
Miscellaneous and unspecified	163	429	4,190	35	4,810	35,600
Total: 5/ gross weight	1,680	24,300	4,940	417 6/	31,300	XX
Chromium content	1,140	14,700	1,760	416	18,000	XX
Stocks, Aug. 31, 1997	1,770	16,300	965	237 7/	19,300	XX
Jan. through Aug.: 2/						
Total	16,200	190,000	35,100	3,130 8/	XX	244,000
Chromium content	11,000	114,000	12,500	2,900	XX	140,000

W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified." XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes revised data from previous months.

3/ Includes structural and hard-facing materials.

4/ Includes magnetic, aluminum, copper, nickel, and other alloys.

5/ Includes estimates.

6/ Includes 336 tons of chromium metal.

7/ Includes 173 tons of chromium metal.

8/ Includes 2,360 tons of chromium metal.

TABLE 3
U.S. CONSUMPTION, BY END USE, AND CONSUMER STOCKS OF
CHROMIUM FERROALLOYS AND METAL IN SEPTEMBER 1997 1/

(Metric tons, gross weight unless otherwise noted)

End use	Ferrochromium		Ferro- chromium silicon	Other	Total	Jan. through Sept. total 2/
	Low- carbon	Medium- and high- carbon				
Steel:						
Carbon	357	399	9	1	766	6,140
Stainless and heat resisting	520	18,900	W	W	19,400	185,000
Full alloy	277	1,630	129	3	2,040	21,400
High-strength low-alloy and electric	185	W	615	W	800	7,650
Tool	W	309	W	--	309	3,190
Cast irons	W	36	1	W	37	803
Superalloys	217	415	--	284	915	7,770
Alloys:						
Welding materials 3/	--	10	--	6	16	111
Other alloys 4/	19	26	--	53	98	794
Miscellaneous and unspecified	132	388	2,720	45	3,290	38,900
Total: 5/ gross weight	1,710	22,100	3,480	391 6/	27,700	XX
Chromium content	1,170	13,500	1,250	346	16,300	XX
Stocks, Sept. 30, 1997	1,520	13,700	692	197 7/	16,100	XX
Jan. through Sept.: 2/						
Total	17,900	212,000	38,600	3,520 8/	XX	272,000
Chromium content	12,100	127,000	13,700	3,230	XX	156,000

W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified." XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes revised data from previous months.

3/ Includes structural and hard-facing materials.

4/ Includes magnetic, aluminum, copper, nickel, and other alloys.

5/ Includes estimates.

6/ Includes 297 tons of chromium metal.

7/ Includes 148 tons of chromium metal.

8/ Includes 2,490 tons of chromium metal.

TABLE 4
U.S. GOVERNMENT STOCKPILE INVENTORY 1/ OF CHROMIUM MATERIALS 2/

(Metric tons)

Period	Chromite ore			Chromium ferroalloys			Chromium metal	
	Chemical	Metal-lurgical	Refractory	High-carbon ferro-chromium	Low-carbon ferro-chromium	Ferro-chromium silicon	Alumino-thermic	Electrolytic
1996:								
September	220,000	647,000	322,000	734,000	283,000	52,700	2,670	5,050
October	220,000	645,000	322,000	732,000	283,000	52,700	2,670	5,050
November	220,000	645,000	322,000	725,000	283,000	52,700	2,670	5,050
December	220,000	645,000	322,000	718,000	283,000	52,700	2,670	5,050
1997:								
January	220,000	637,000	322,000	704,000	283,000	52,700	2,670	5,050
February	220,000	633,000	322,000	695,000	283,000	52,700	2,670	5,050
March	220,000	627,000	318,000	695,000	283,000	52,700	2,670	5,050
April	220,000	626,000	318,000	695,000	283,000	52,700	2,670	5,050
May	220,000	620,000	312,000	689,000	283,000	52,700	2,670	5,050
June	217,000	614,000	309,000	689,000	283,000	52,700	2,670	5,050
July	217,000	611,000	309,000	689,000	283,000	52,700	2,670	5,050
August	217,000	592,000	309,000	689,000	283,000	52,700	2,670	5,050
September	217,000	592,000	309,000	689,000	283,000	52,700	2,670	5,050

1/ Includes specification and non-specification grade materials and materials set aside for disposal but not yet shipped.

2/ Data are rounded to three significant digits.

Source: Defense National Stockpile Center.

TABLE 5
U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS AND METAL 1/

Period	Chromite ore		Chromium ferroalloys 2/			Chromium metal 3/	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
1996:							
August	1,060	\$564	676	411	\$694	63	\$717
September	614	132	955	554	912	137	772
October	1,310	152	1,100	680	956	97	1,010
November	1,390	486	1,450	852	1,350	93	825
December	1,060	214	6,200	3,750	3,140	89	1,090
Jan.-Dec.	69,400	11,100	15,800	9,520	14,000	1,330	12,800
1997:							
January	1,540	364	635	405	718	60	600
February	5,930	977	975	609	1,160	142	1,120
March	1,480	487	841	527	939	180	1,260
April	1,830	376	1,060	561	1,300	379	2,610
May	1,230	237	1,020	585	1,030	387	2,820
June	643	131	995	589	1,090	251	1,840
July	759	222	358	220	387	274	1,900
August	1,070	307	633	385	714	317	2,040
Total	14,500	3,100	6,520	3,880	7,340	1,990	14,200

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes low-, medium-, and high-carbon ferrochromium, and ferrochromium-silicon.

3/ Includes wrought and unwrought and waste and scrap.

Source: Bureau of the Census.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE,
FERROCHROMIUM, AND CHROMIUM METAL 1/

(Metric tons)

	1996	1997			
	Jan.-Dec.	June	July	Aug.	Jan.-Aug.
Chromite ore:					
Not more than 40% chromic oxide:					
Gross weight	8,030	162	162	893	7,070
Chromic oxide content	2,650	19	19	107	2,080
More than 40% but less than 46% chromic oxide:					
Gross weight	25,400	--	--	5,250	19,500
Chromic oxide content	11,100	--	--	2,410	8,970
46% or more chromic oxide:					
Gross weight	217,000	3,050	3,800	68,000	214,000
Chromic oxide content	102,000	1,430	1,750	31,700	100,000
Total, all grades:					
Gross weight	250,000	3,210	3,960	74,100	241,000
Chromic oxide content	116,000	1,450	1,770	34,200	111,000
Ferrochromium:					
Low-carbon: 2/					
Gross weight	60,700	5,100	6,750	1,210	46,200
Chromium content	38,400	3,250	4,660	773	30,400
Medium-carbon: 3/					
Gross weight	36	--	22	1,300	1,550
Chromium content	23	--	12	671	831
High-carbon: 4/					
Gross weight	359,000	49,900	30,800	31,100	221,000
Chromium content	207,000	26,000	18,400	16,000	124,000
Total, all grades					
Gross weight	420,000	55,000	37,600	33,600	269,000
Chromium content	246,000	29,200	23,100	17,400	155,000
Chromium metal:					
Other than waste and scrap	8,670	974	824	902	6,910
Waste and scrap	67	--	(5/)	--	3
Total, all grades	8,730	974	824	902	6,920

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Ferrochromium containing not more than 3% carbon.

3/ Ferrochromium containing more than 3% carbon but not more than 4% carbon.

4/ Ferrochromium containing more than 4% carbon.

5/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 7
U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE IN AUGUST 1997,
BY GRADE AND BY COUNTRY 1/

Country	August			January-August		
	Gross weight (metric tons)	Cr ₂ O ₃ (metric tons)	Value 2/ (thousands)	Gross weight (metric tons)	Cr ₂ O ₃ (metric tons)	Value 2/ (thousands)
Not more than 40% chromic oxide:						
China	--	--	--	20	7	\$6
Japan	657	67	\$3	657	67	3
Philippines	--	--	--	5,780	1,910	1,050
South Africa	236	40	9	600	94	67
Venezuela	--	--	--	20	7	6
Total	893	107	12	7,070	2,080	1,140
More than 40% but less than 46% chromic oxide:						
South Africa	5,250	2,410	393	19,500	8,970	1,460
46% or more chromic oxide:						
Canada	--	--	--	13	6	5
Russia	--	--	--	22	261	117
South Africa	68,000	31,700	3,830	214,000	100,000	15,100
Total	68,000	31,700	3,830	214,000	100,000	15,200
Total, all grades:						
Canada	--	--	--	13	6	4
China	--	--	--	20	7	6
Japan	657	67	3	657	67	3
Philippines	--	--	--	5,780	1,910	1,050
Russia	--	--	--	22	261	117
South Africa	73,500	34,200	4,230	234,000	109,000	16,600
Venezuela	--	--	--	20	7	6
Total	74,100	34,200	4,240	241,000	111,000	17,800

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance and other charges incurred in bringing the merchandise to the United States.

Source: Bureau of the Census.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN AUGUST 1997,
BY GRADE AND BY COUNTRY 1/

Country	August			January-August		
	Gross weight (metric tons)	Chromium content (metric tons)	Value 2/ (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value 2/ (thousands)
High-carbon ferrochromium: 3/						
Albania	--	--	--	2,510	1,520	\$1,350
Canada	--	--	--	20	9	2
China	4,800	3,050	\$3,090	13,900	8,730	8,790
Croatia	--	--	--	8,400	5,450	4,380
India	--	--	--	11,200	6,970	6,840
Kazakstan	--	--	--	262	193	445
Russia	11,800	5,520	7,320	39,900	17,400	28,300
South Africa	14,500	7,430	6,640	68,900	32,900	28,700
Turkey	--	--	--	41,200	28,500	25,700
United Kingdom	--	--	--	79	54	58
Zimbabwe	--	--	--	35,000	22,100	21,100
Total	31,100	16,000	17,100	221,000	124,000	126,000
Medium-carbon ferrochromium: 4/						
Russia	--	--	--	210	137	240
South Africa	1,300	671	568	1,300	671	568
Switzerland	--	--	--	17	11	16
United Kingdom	--	--	--	22	12	9
Total	1,300	671	568	1,550	831	834

See footnotes at end of table.

TABLE 8--Continued
U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN AUGUST 1997,
BY GRADE AND BY COUNTRY 1/

Country	August			January-August		
	Gross weight (metric tons)	Chromium content (metric tons)	Value 2/ (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value 2/ (thousands)
Low-carbon ferrochromium: 5/						
China	257	169	\$202	2,700	1,780	\$3,010
Germany	207	100	362	7,710	5,360	20,000
Japan	--	--	--	281	102	520
Kazakstan	--	--	--	1,300	845	1,560
Macedonia	--	--	--	21	15	15
Russia	366	251	371	24,200	16,500	30,900
South Africa	100	63	154	7,500	4,240	5,910
Sweden	--	--	--	20	14	34
Turkey	--	--	--	100	73	164
Zimbabwe	280	189	310	2,300	1,540	2,710
Total	1,210	773	1,400	46,200	30,400	64,800
Total, all grades:						
Albania	--	--	--	2,510	1,520	1,350
Canada	--	--	--	20	9	2
China	5,060	3,220	3,300	16,600	10,500	11,800
Croatia	--	--	--	8,400	5,450	4,380
Germany	--	--	--	7,710	5,360	20,000
India	207	100	362	11,200	6,970	6,840
Japan	--	--	--	281	102	520
Kazakstan	--	--	--	1,560	1,040	2,000
Macedonia	--	--	--	21	15	15
Russia	12,200	5,770	7,690	64,300	34,000	59,500
South Africa	15,900	8,170	7,360	77,700	37,800	35,100
Sweden	--	--	--	20	14	34
Switzerland	--	--	--	17	11	16
Turkey	--	--	--	41,300	28,600	25,900
United Kingdom	--	--	--	101	66	67
Zimbabwe	280	189	310	37,300	23,600	23,800
Total	33,600	17,400	19,000	269,000	155,000	191,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance and other charges incurred in bringing the merchandise to the United States.

3/ Ferrochromium containing more than 4% carbon.

4/ Ferrochromium containing more than 3% but not more than 4% carbon.

5/ Ferrochromium containing not more than 3% carbon.

Source: Bureau of the Census.

TABLE 9
U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN
AUGUST 1997, BY GRADE AND BY COUNTRY 1/

Country	August		January-August	
	Gross weight (metric tons)	Value 2/ (thousands)	Gross weight (metric tons)	Value 2/ (thousands)
Waste and scrap:				
Canada	--	--	3	\$14
Japan	--	--	(3/)	7
Mexico	--	--	(3/)	2
Total	--	--	3	22
Other than waste and scrap:				
Belgium	--	--	18	115
Bulgaria	--	--	80	276
Canada	--	--	1	3
China	138	\$913	1,650	9,910
France	223	1,830	1,250	10,100
Germany	3	70	33	476
Greece	--	--	1	7
Hong Kong	--	--	102	617
Italy	1	8	2	22
Japan	3	442	142	4,090
Mexico	--	--	20	88
Russia	479	3,020	2,580	16,000
Spain	--	--	3	3
Switzerland	--	--	(3/)	30
Taiwan	4	23	14	62
United Kingdom	51	428	1,030	8,620
Venezuela	--	--	(3/)	2
Total	902	6,730	6,910	50,500
Total, all grades:				
Belgium	--	--	18	115
Bulgaria	--	--	80	276
Canada	--	--	4	17
China	138	913	1,650	9,910
France	223	1,830	1,250	10,100
Germany	3	70	33	476
Greece	--	--	1	7
Hong Kong	--	--	102	617
Italy	1	8	2	22
Japan	3	442	142	4,100
Mexico	--	--	20	90
Russia	479	3,020	2,580	16,000
Spain	--	--	3	3
Switzerland	--	--	(3/)	30
Taiwan	4	23	14	62
United Kingdom	51	428	1,030	8,620
Venezuela	--	--	(3/)	2
Total	902	6,730	6,920	50,500

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance and other charges incurred in bringing the merchandise into the United States.

3/ Less than 1/2 unit.

Source: Bureau of the Census.